

FIG. 1

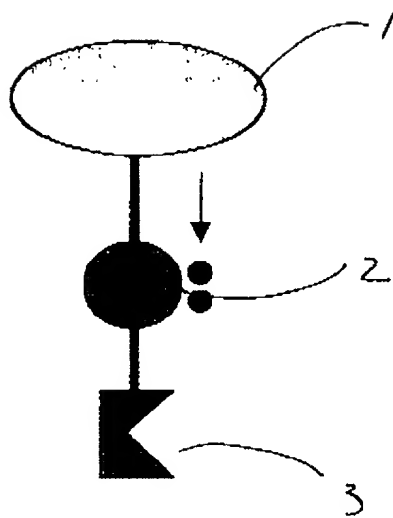


FIG. 1

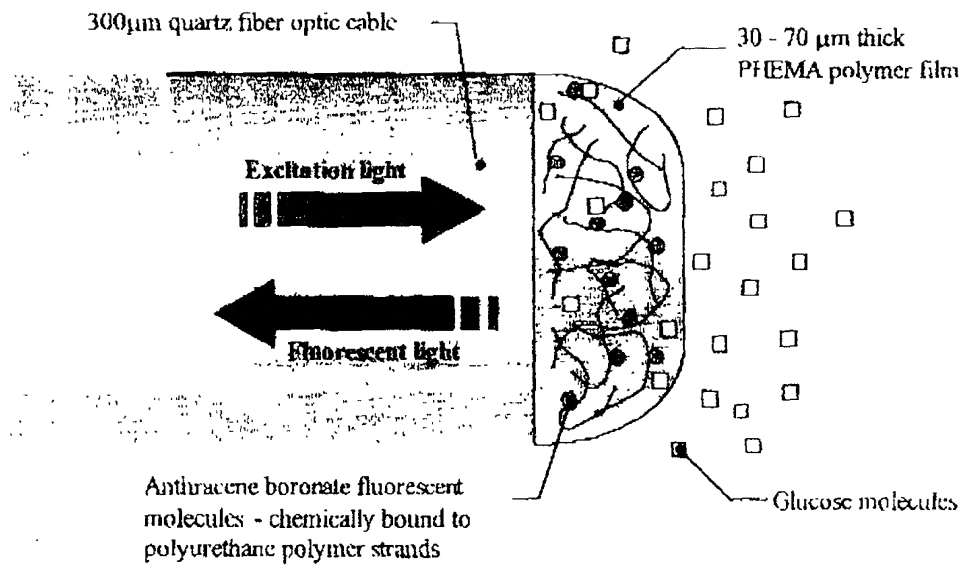


FIG. 2

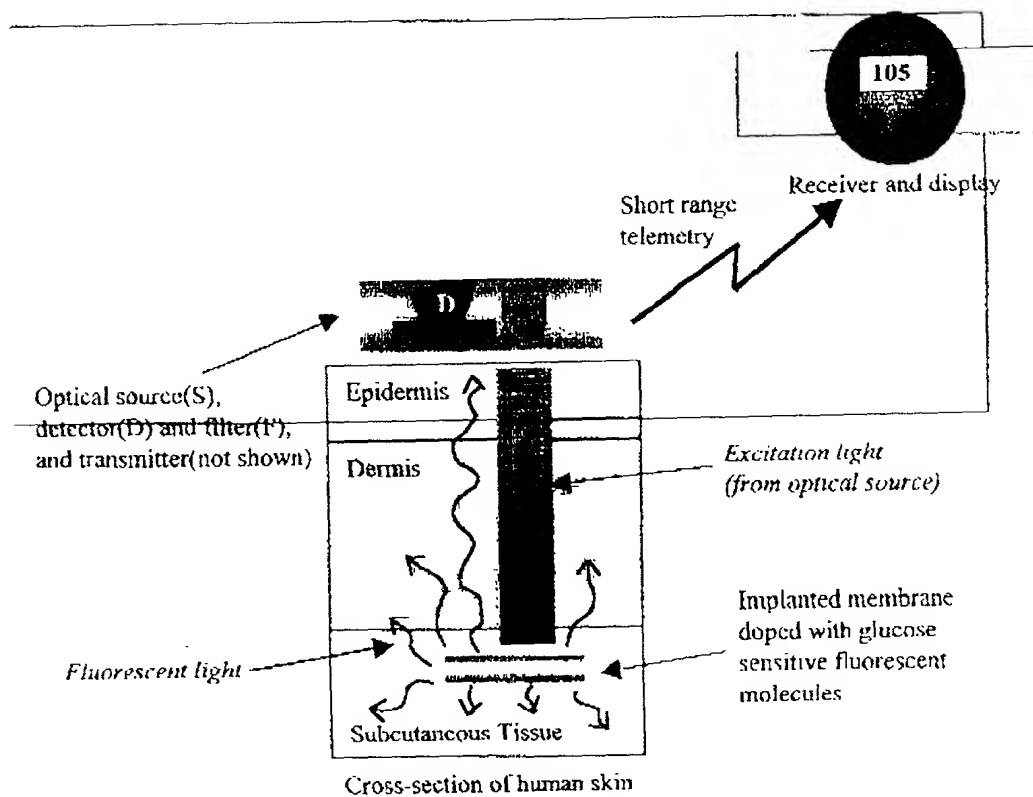


FIG. 3

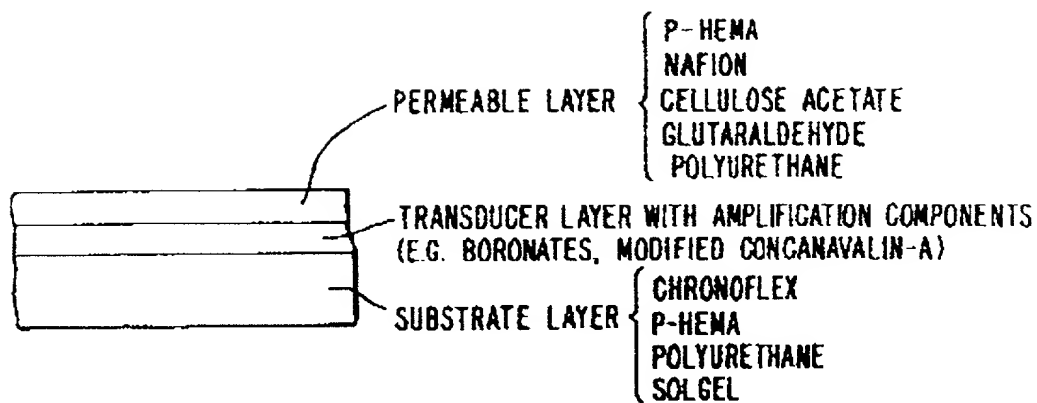


FIG. 4A.

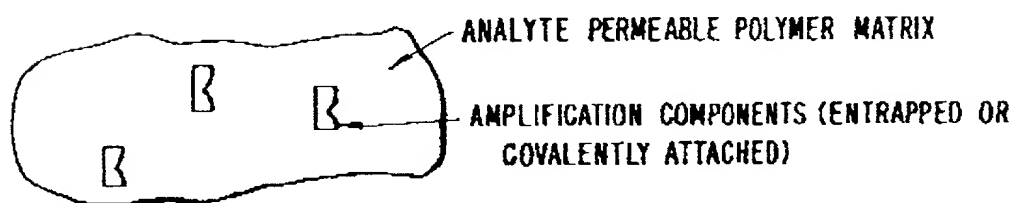


FIG. 4B.

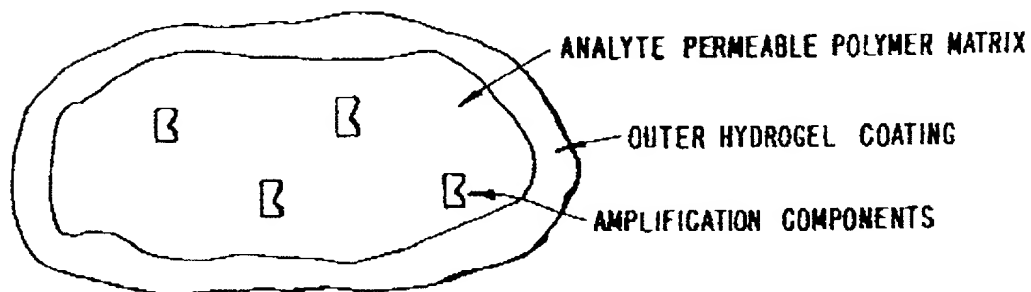


FIG. 4C.

FIG. 4A-4C

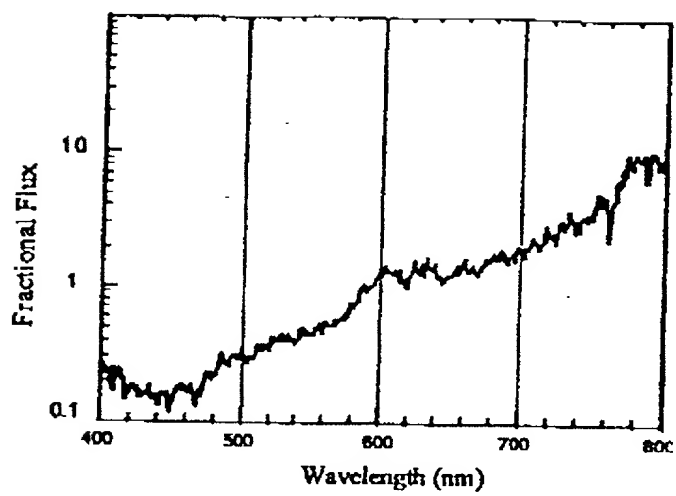


FIG. 5

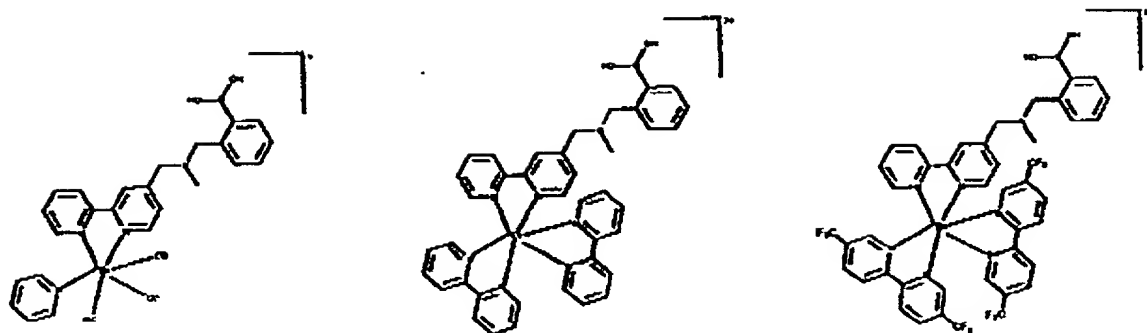
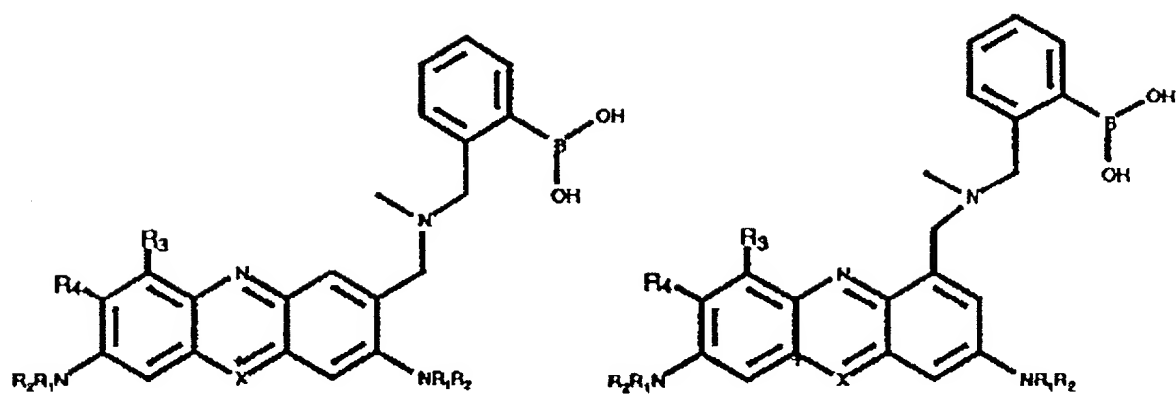
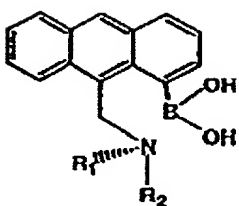
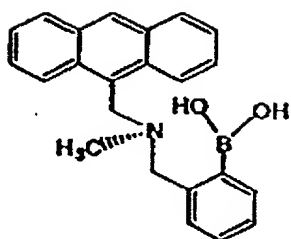


FIG. 6



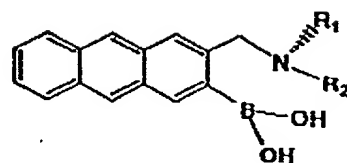
$X = O, S$
 $R_1 = H, Me, Et$
 $R_2 = H, Me, Et$
 $R_3 = H, Me$
 $R_4 = H, Me$

FIG. 7



$R_1 = H, \text{ alkyl, aryl, benzyl}$

$R_2 = H, \text{ alkyl, aryl, benzyl}$



$R_1 = H, \text{ alkyl, aryl, benzyl}$

$R_2 = H, \text{ alkyl, aryl, benzyl}$

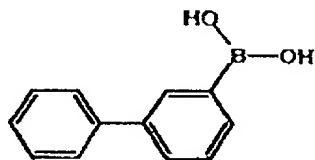
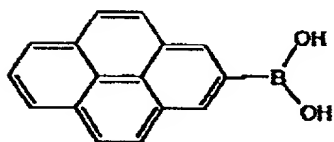
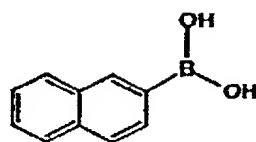
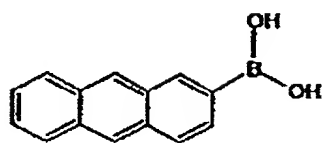


FIG. 8

Naphthylimide Boronate

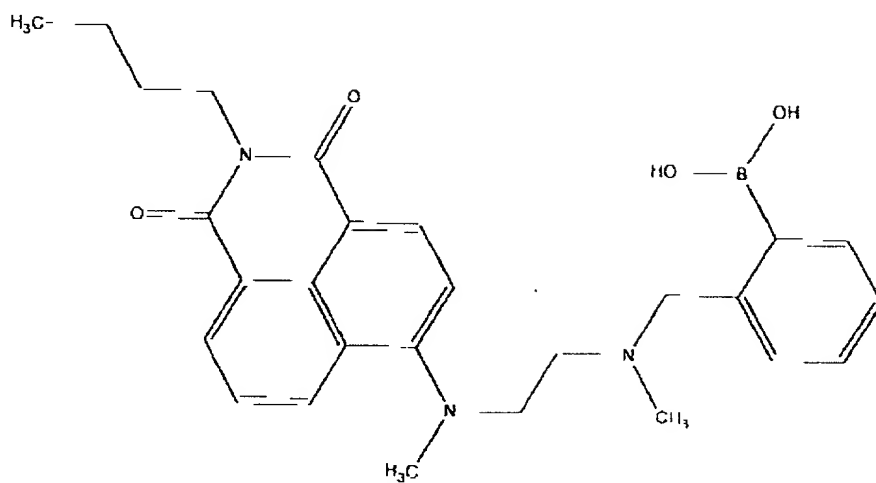


FIG. 9A

6-Chloro-10methyl-5Hbenzo[a]phenoxazin-5-one (COB)

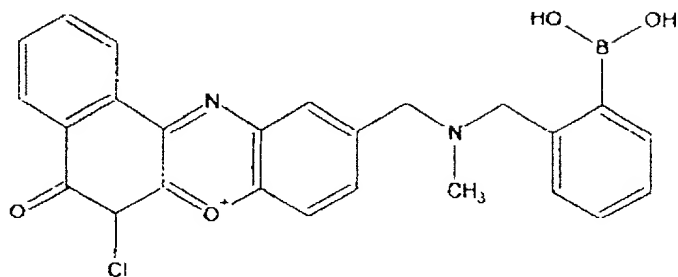


FIG. 9B

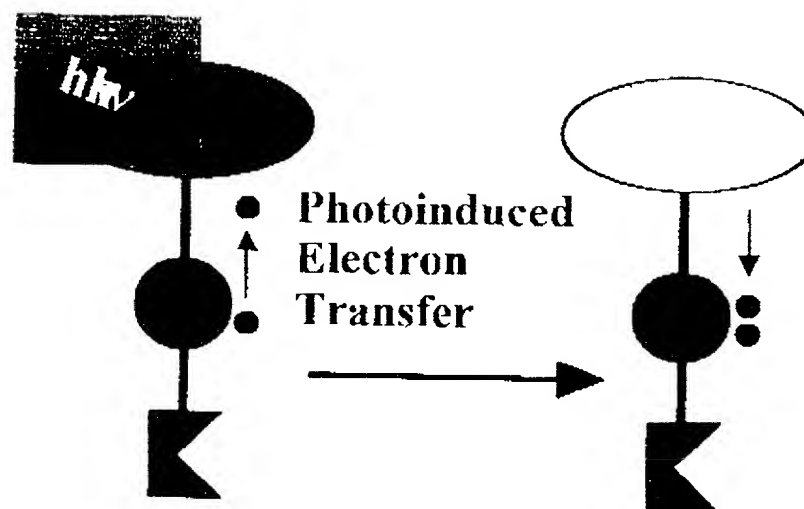
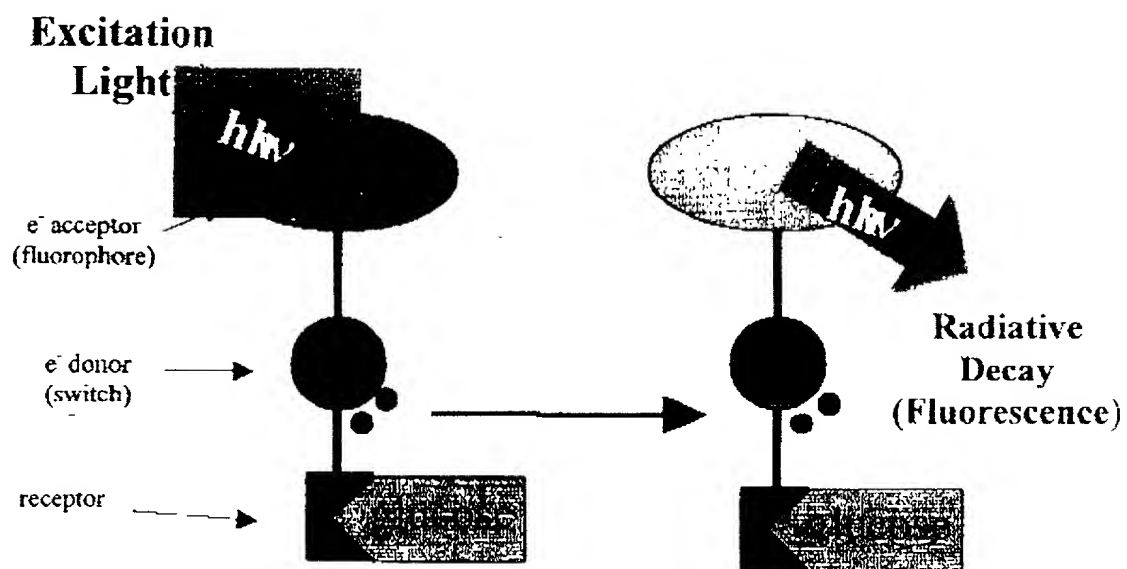


FIG. 10

FIG. 11

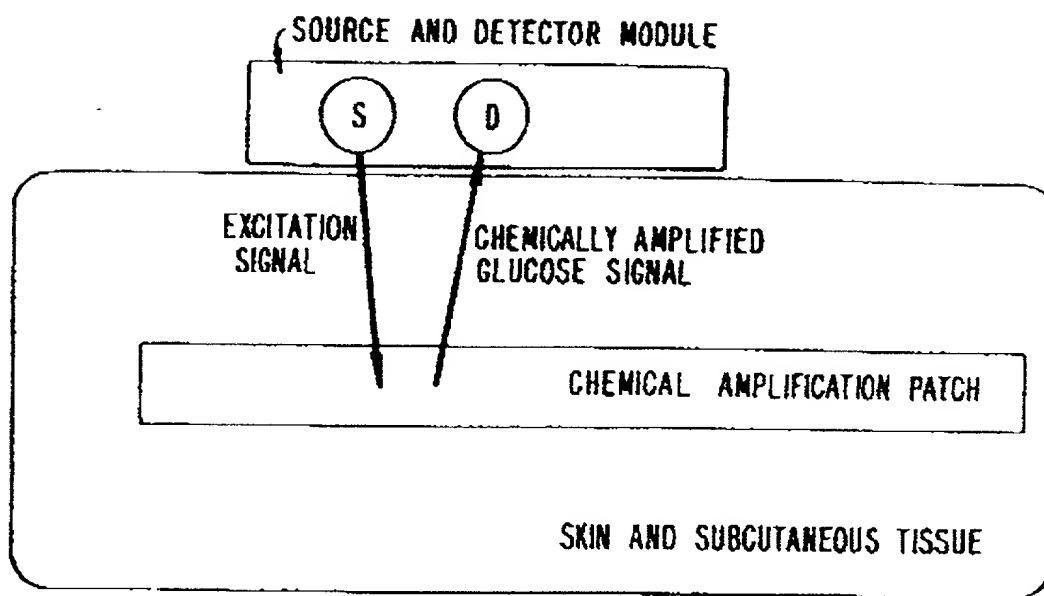


FIG. 11

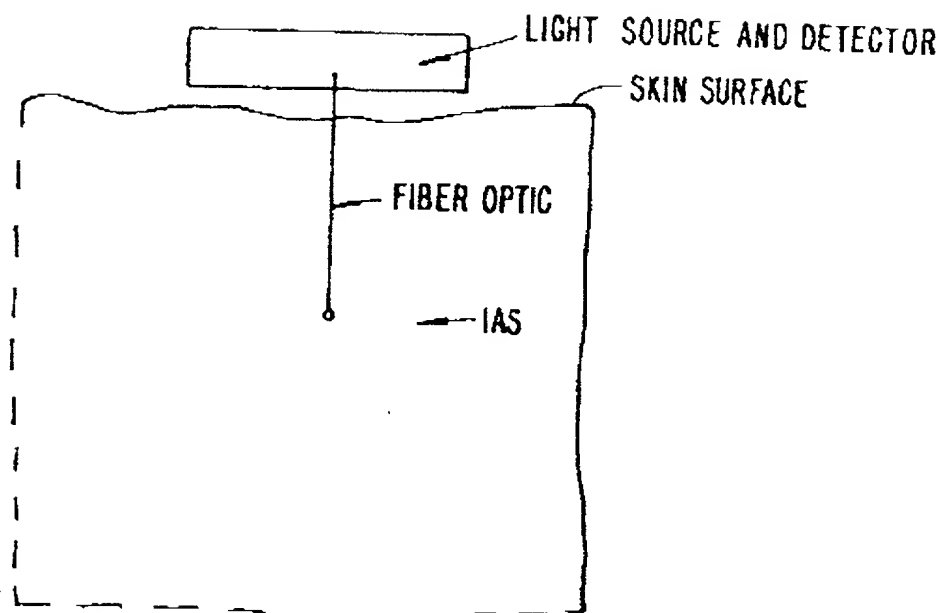


FIG. 12

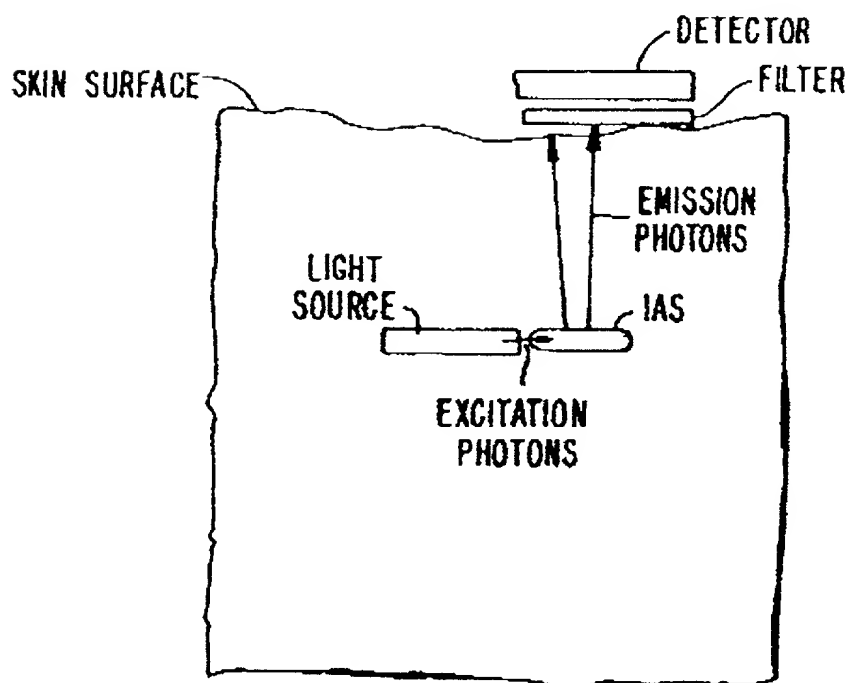


FIG. 13

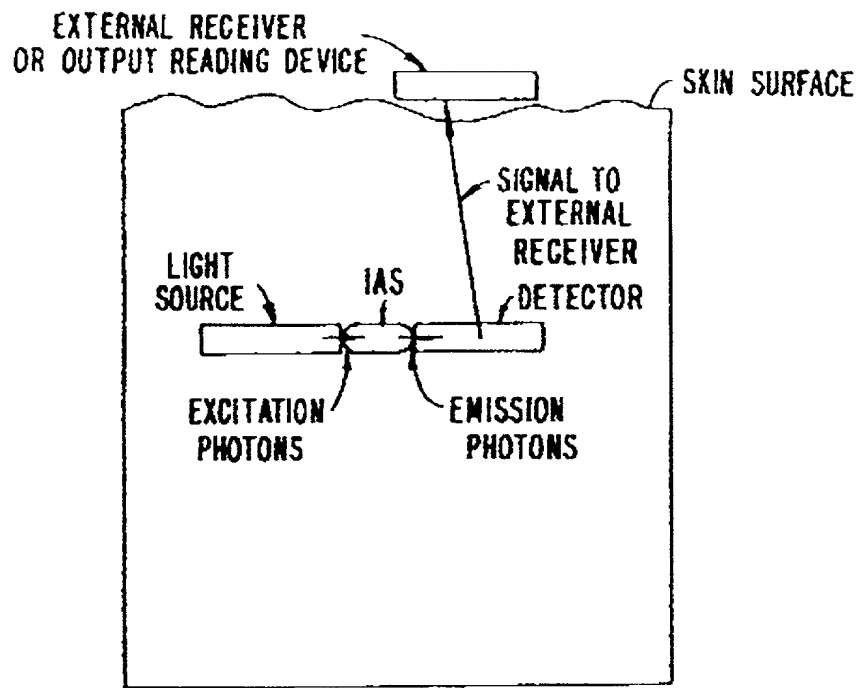


FIG. 14

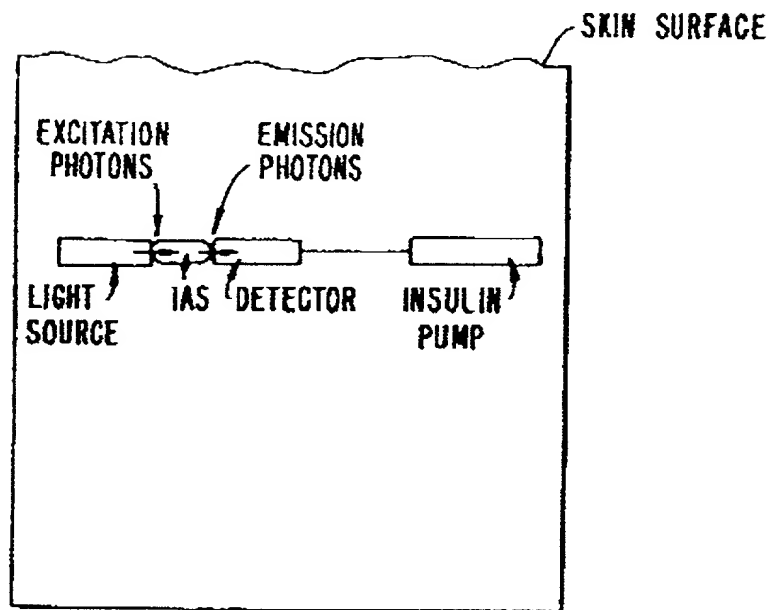


FIG. 15

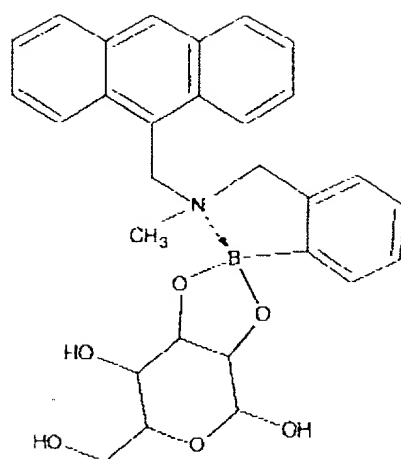


FIG. 16

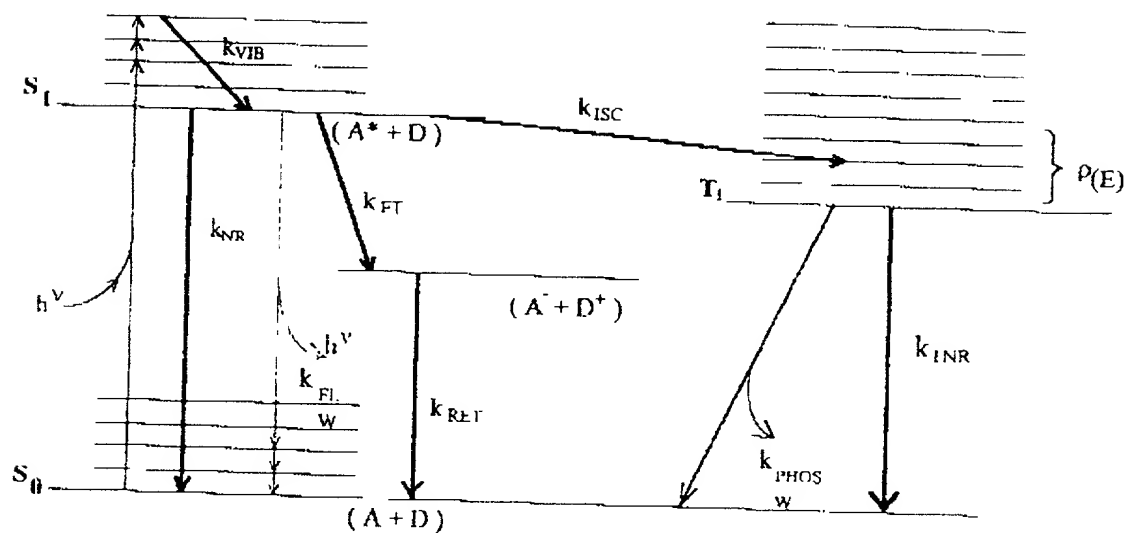


FIG. 17A

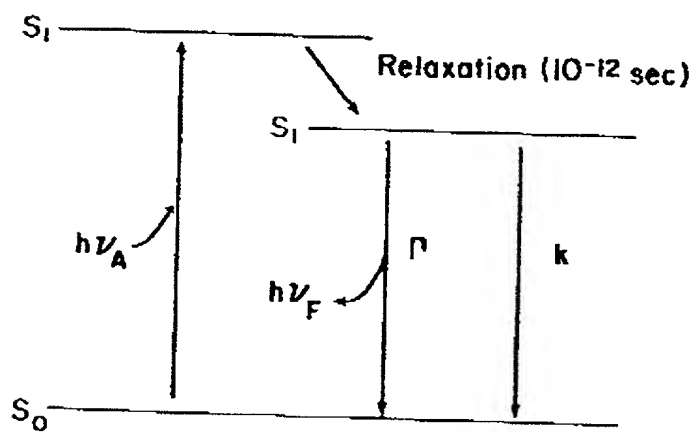


FIG. 17B

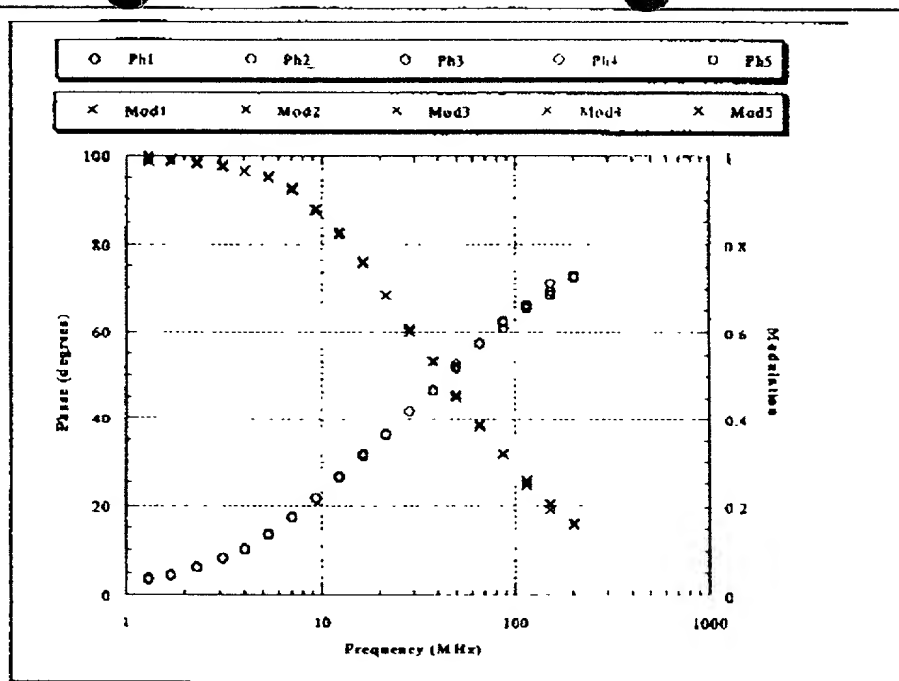


FIG. 18

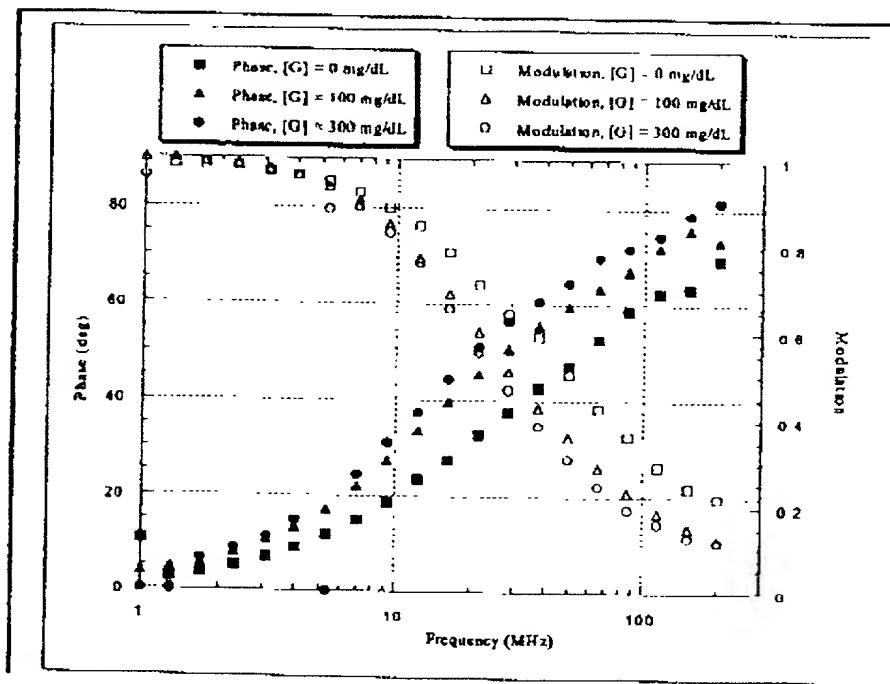


FIG. 19

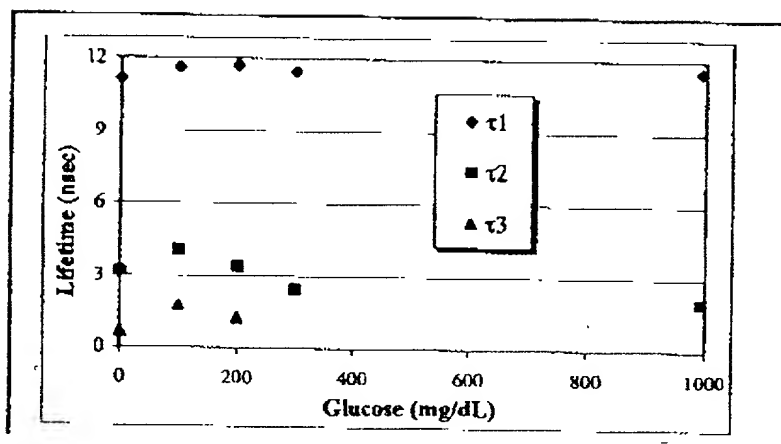


FIG. 20

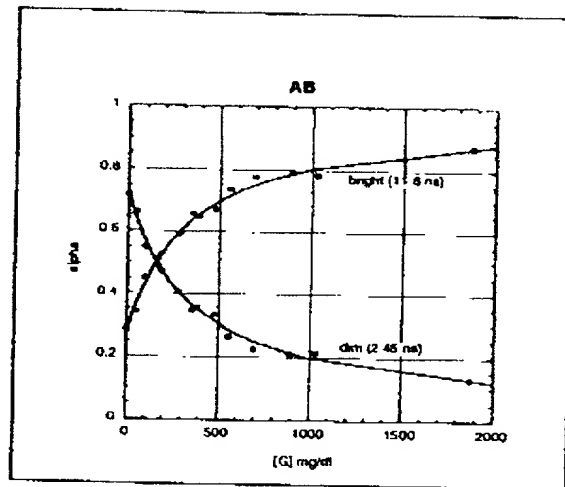


FIG. 21

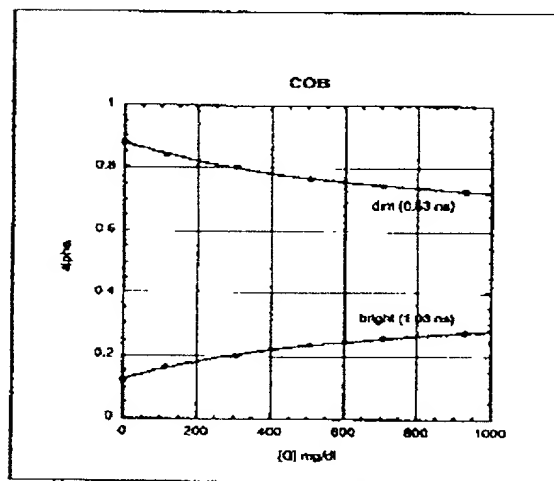


FIG. 22

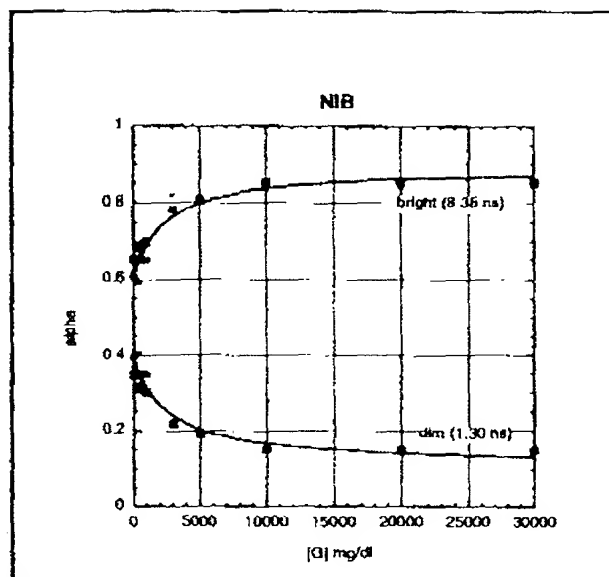


FIG. 23A

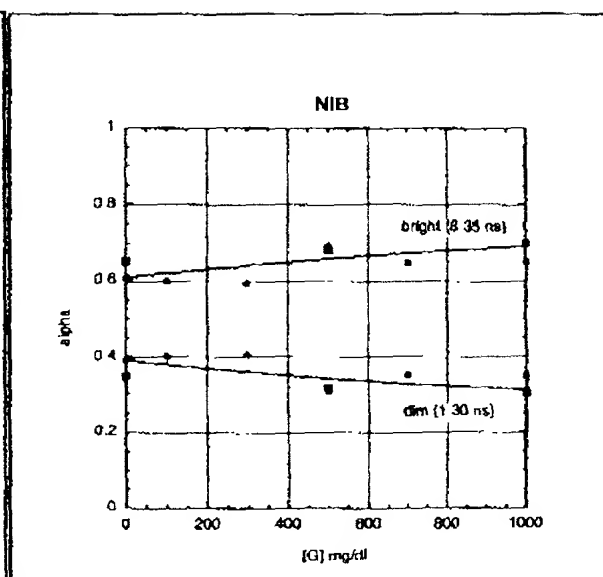


FIG. 23B

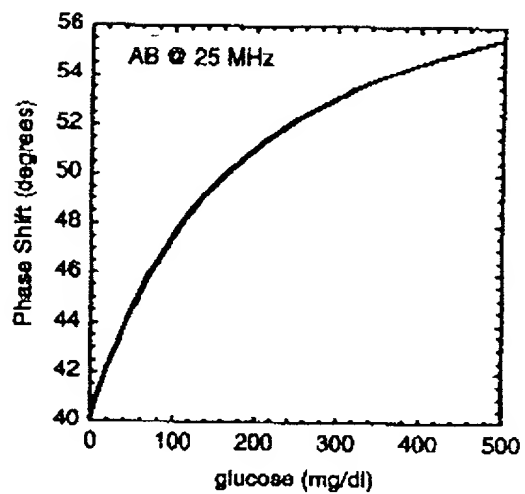


FIG. 24A

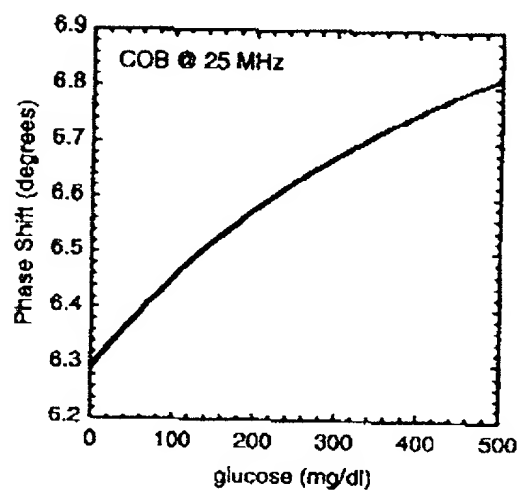


FIG. 24B

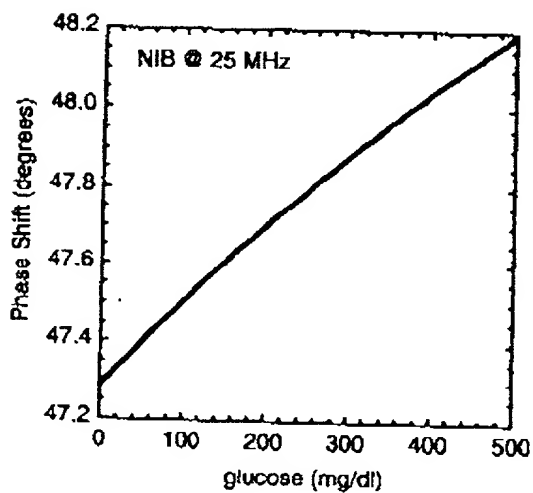


FIG. 24C

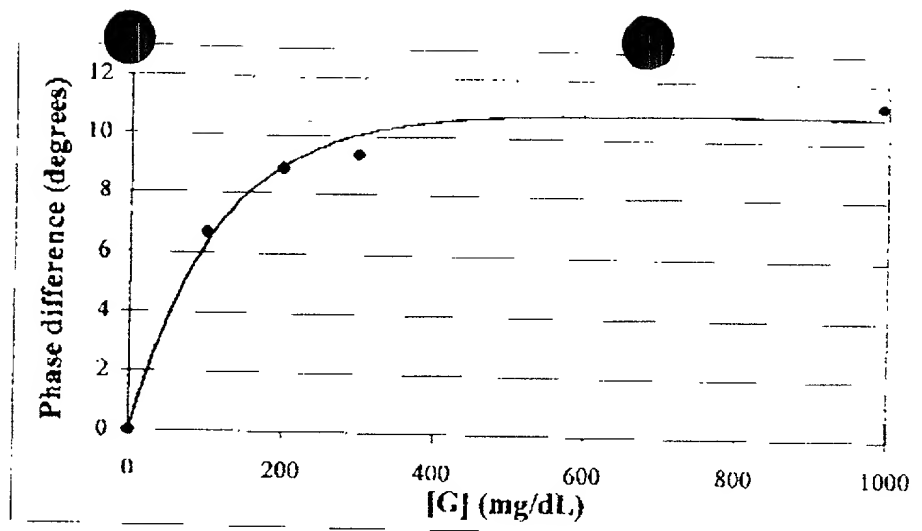


FIG. 25

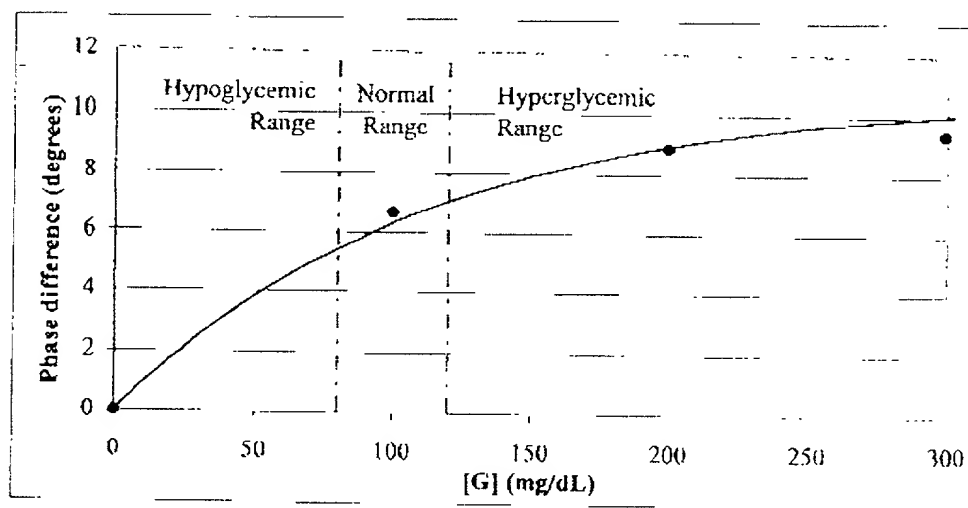


FIG. 26

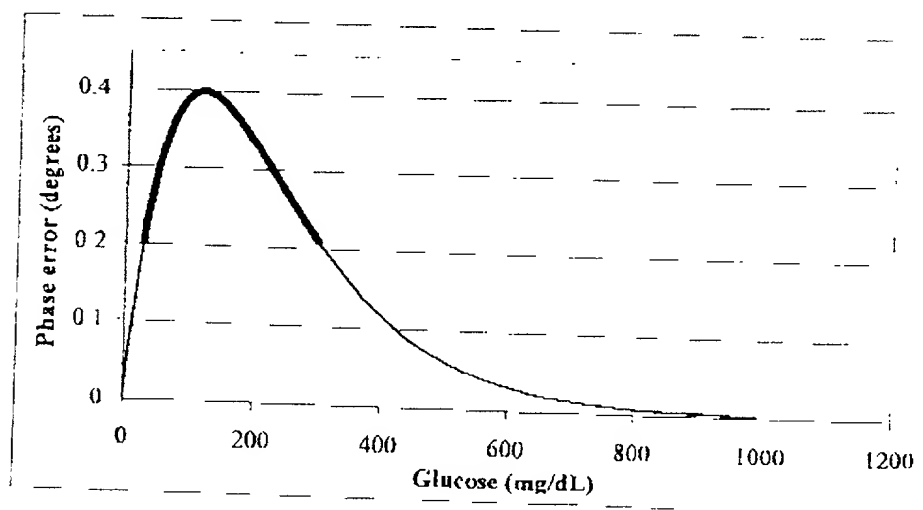


FIG. 27

000000-51492860

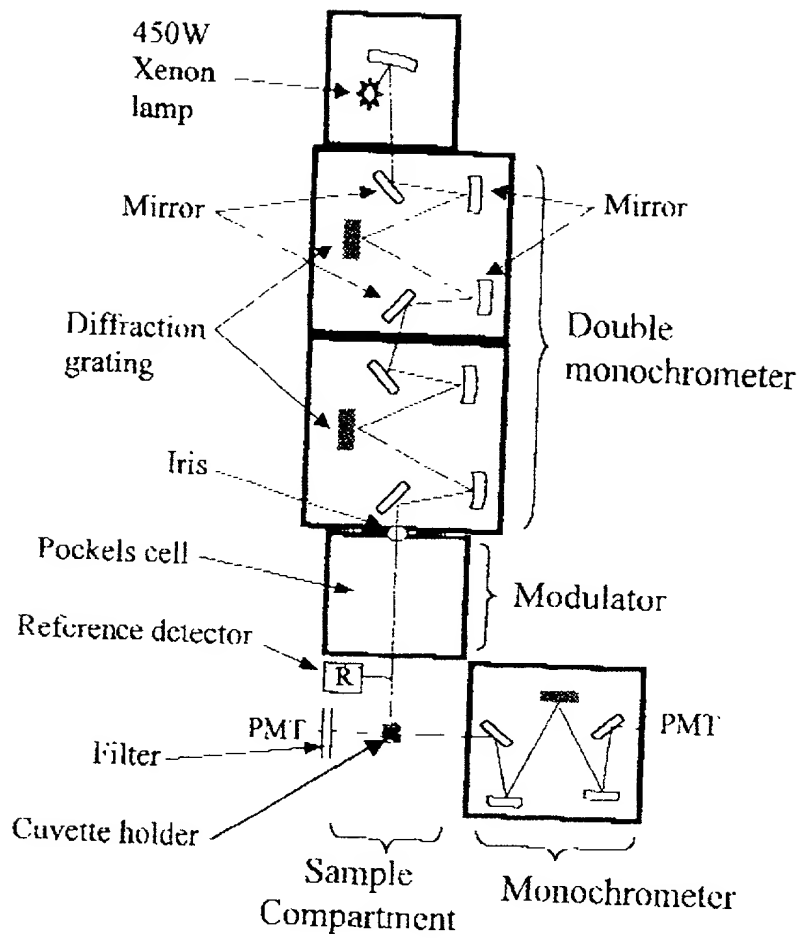


FIG. 28

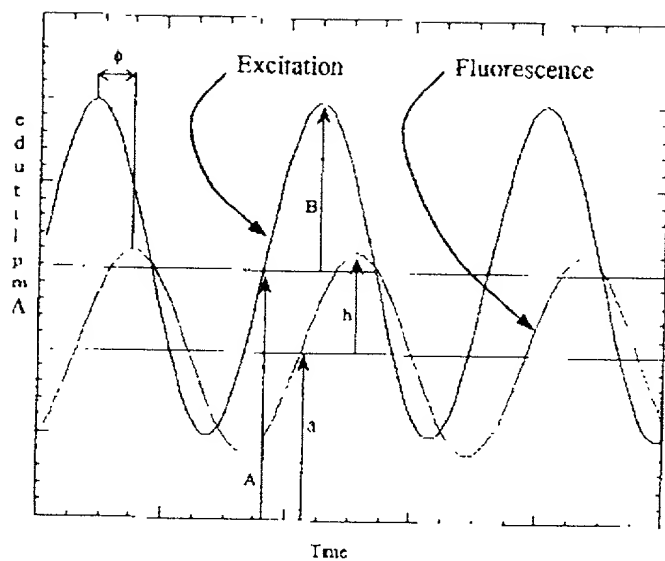


FIG. 29

Downloaded from www.sciencedirect.com

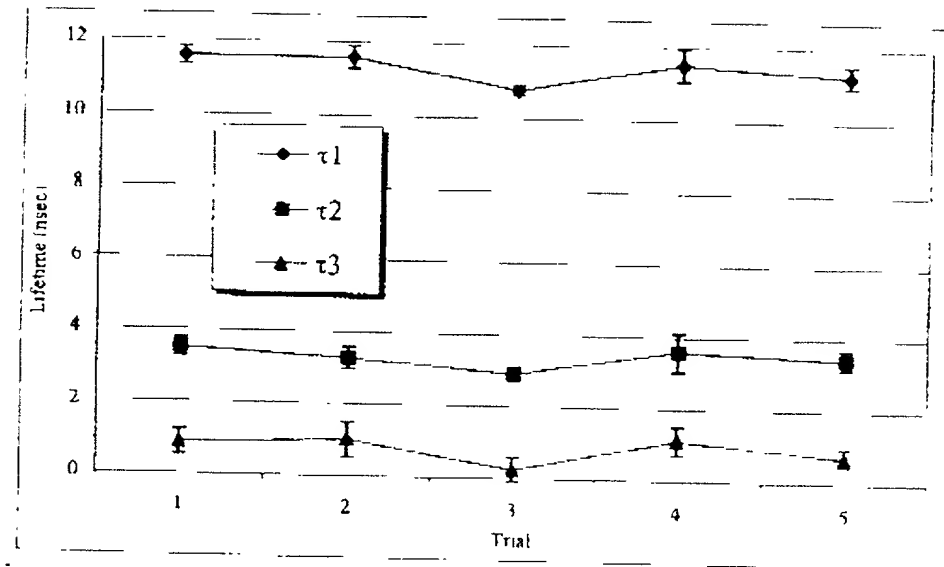


FIG. 30

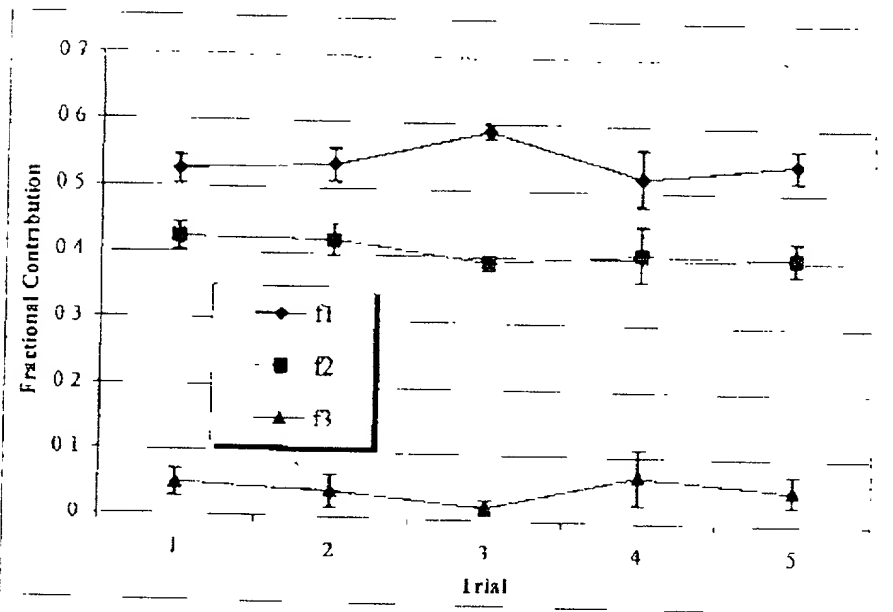


FIG. 31

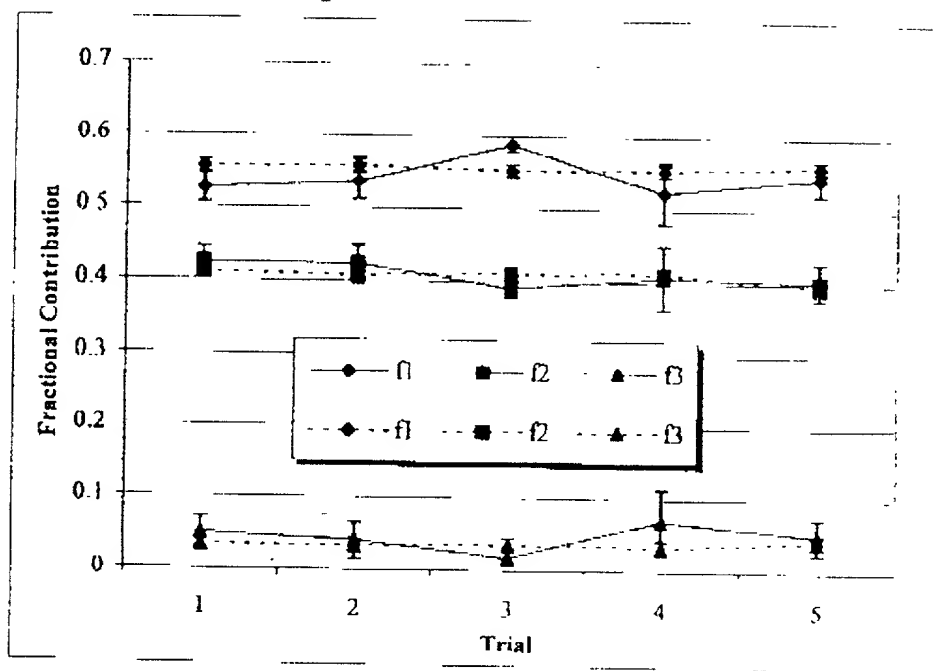


FIG. 32

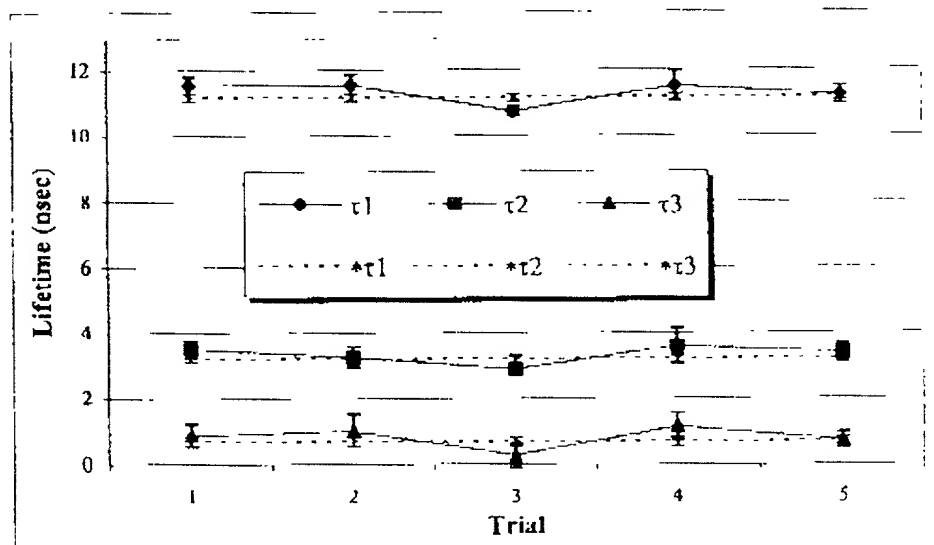


FIG. 33

0444-542860

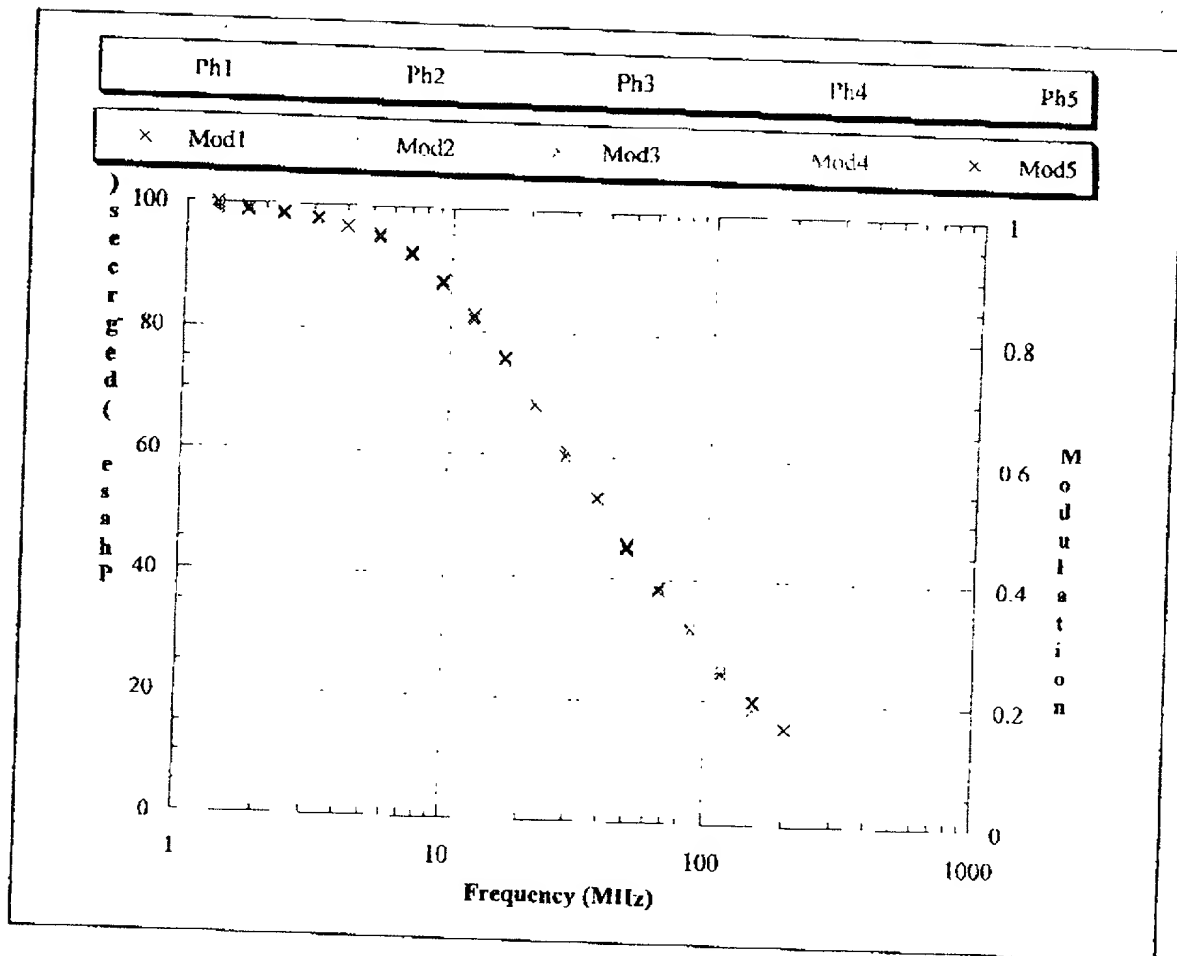


FIG. 34

FIG. 35 A



FIG. 35 B

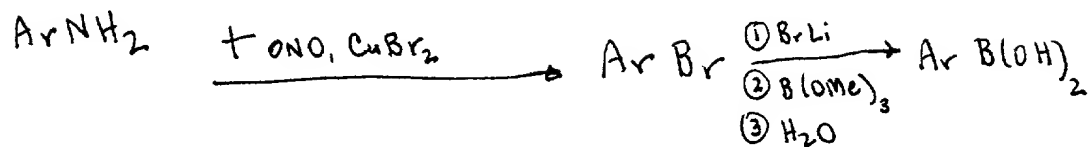


FIG. 35 C

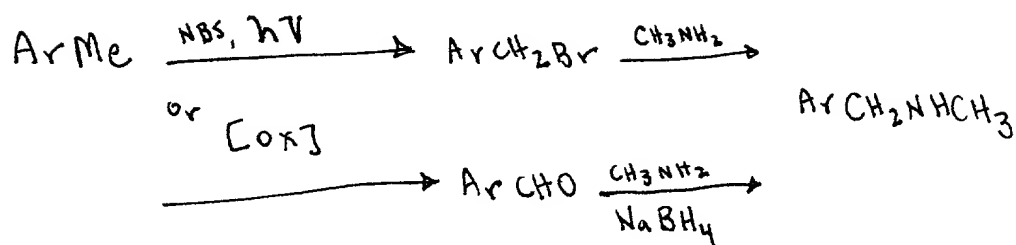
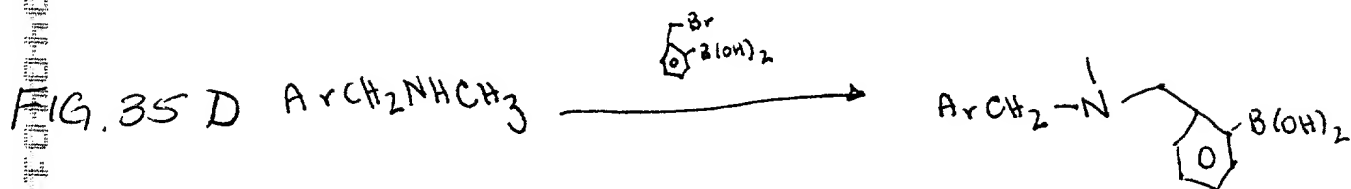


FIG. 35 D



FORM 542-2860

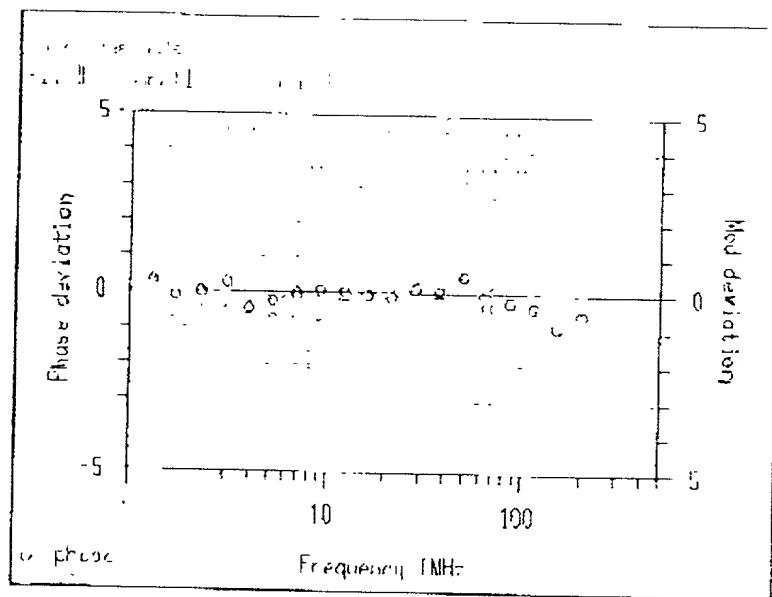


FIG. 36A

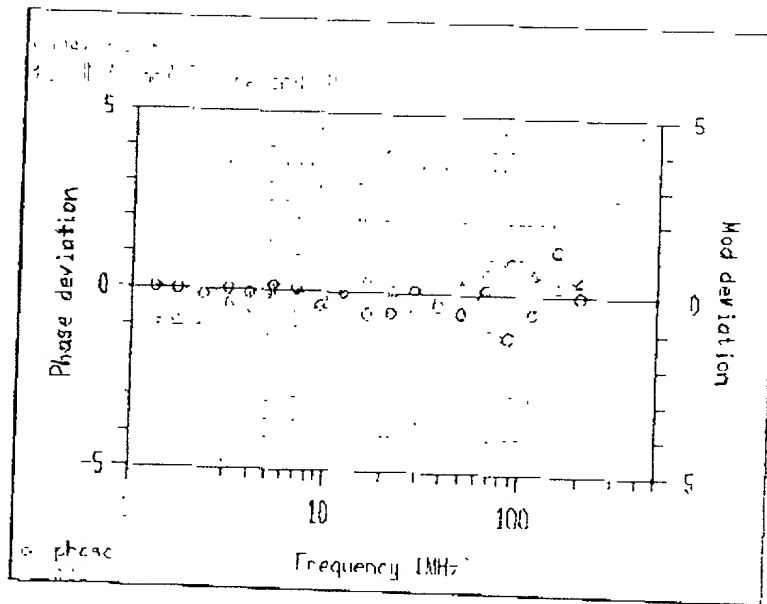


FIG. 36B

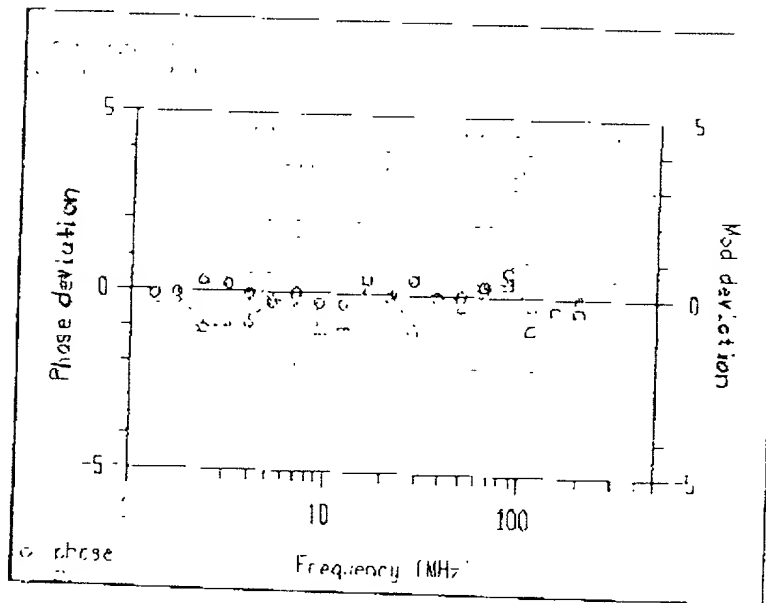


FIG. 36C

A graph showing the frequency response of a phase-locked loop (PLL) for a 1000 Hz sine wave. The x-axis is Frequency (MHz) on a logarithmic scale from 1 to 100. The left y-axis is Phase deviation (degrees) from -5 to 5. The right y-axis is Mod deviation (volts) from -5 to 5. The phase deviation curve (solid line with circles) is flat at 0 degrees. The modulation deviation curve (dashed line with circles) shows a peak of about 4.5 volts at 10 MHz and decreases to about 1.5 volts at 100 MHz.

Frequency (MHz)	Phase deviation (degrees)	Mod deviation (volts)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	4.5
15	0	3.5
20	0	3.0
30	0	2.5
40	0	2.0
50	0	1.8
60	0	1.6
70	0	1.5
80	0	1.4
90	0	1.3
100	0	1.2

A graph showing the frequency stability of a 100 Mc oscillator. The x-axis is Frequency (MHz) on a logarithmic scale from 1 to 100. The left y-axis is Phase deviation from -5 to 5. The right y-axis is Mod deviation from -5 to 5. Data points for phase deviation are marked with circles and for modulation deviation with crosses. Both show stability around zero across the frequency range.

Frequency (MHz)	Phase deviation	Mod deviation
1.0	0.0	0.0
1.5	0.0	0.0
2.0	0.0	0.0
3.0	0.0	0.0
5.0	0.0	0.0
7.0	0.0	0.0
10.0	0.0	0.0
15.0	0.0	0.0
20.0	0.0	0.0
30.0	0.0	0.0
50.0	0.0	0.0
70.0	0.0	0.0
100.0	0.0	0.0

FIG. 36E

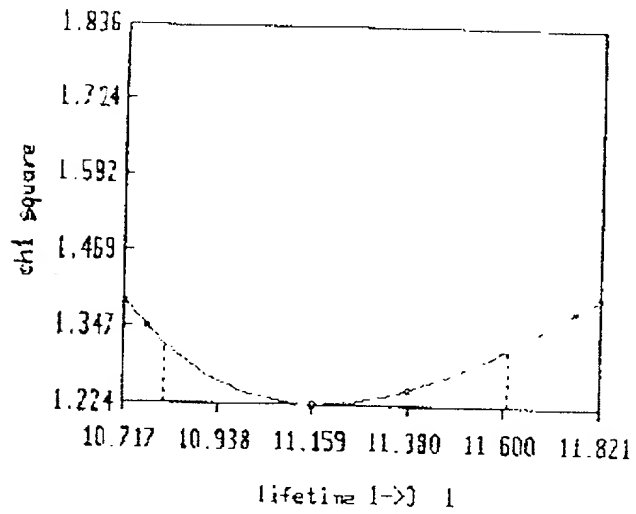


FIG. 37A

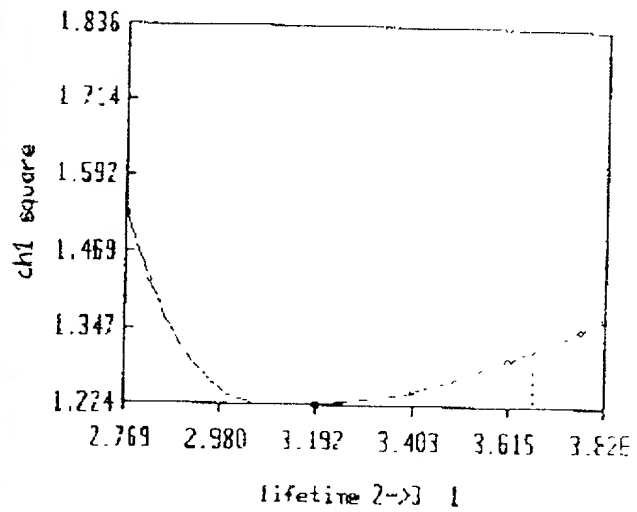


FIG. 37B

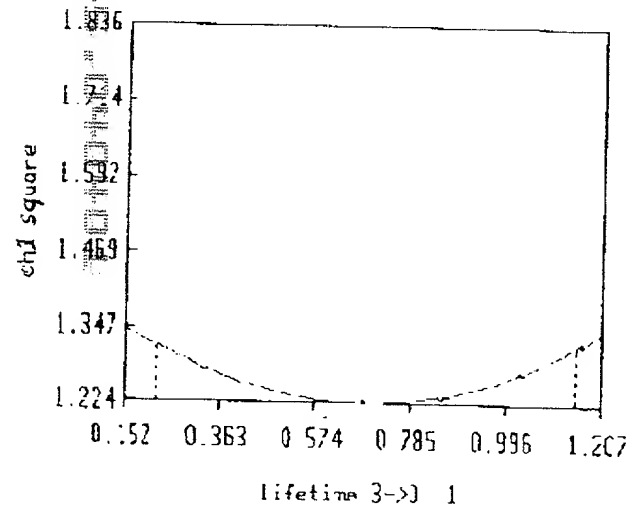


FIG. 37C

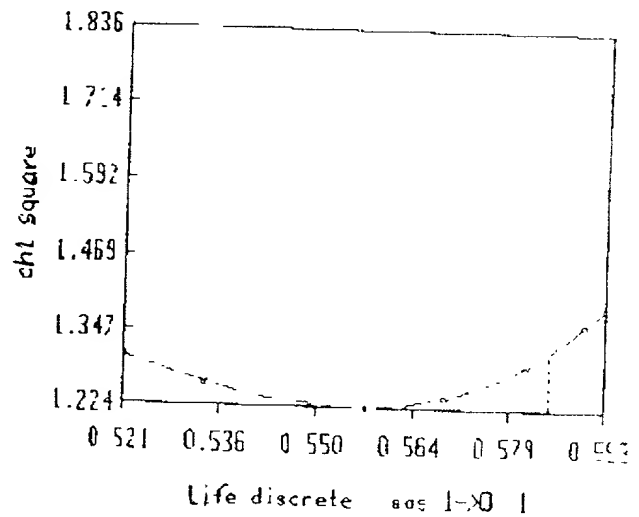


FIG. 37D

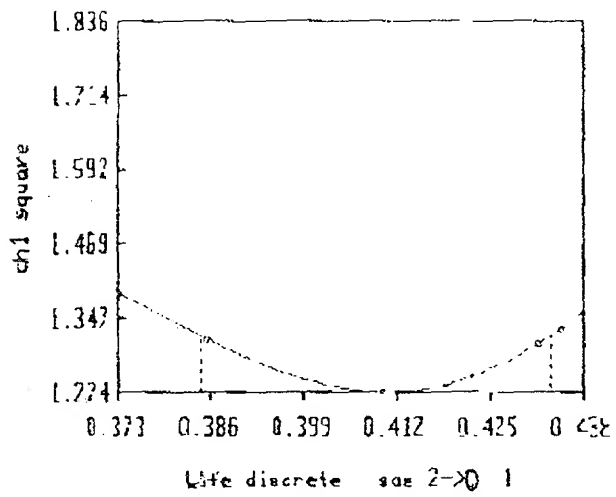


FIG. 37E

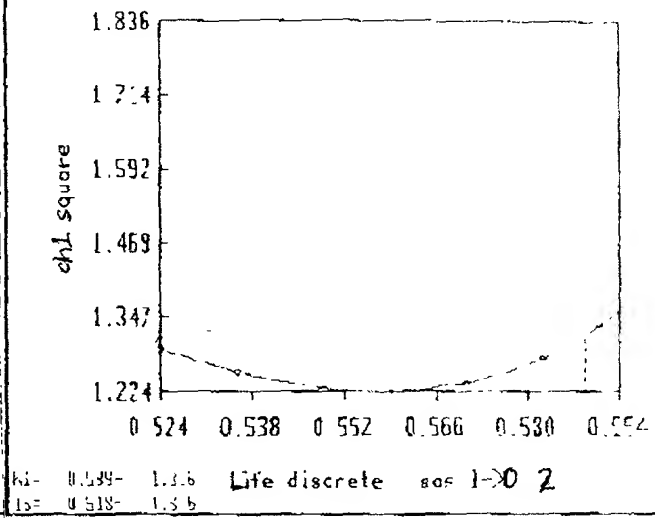


FIG. 37F

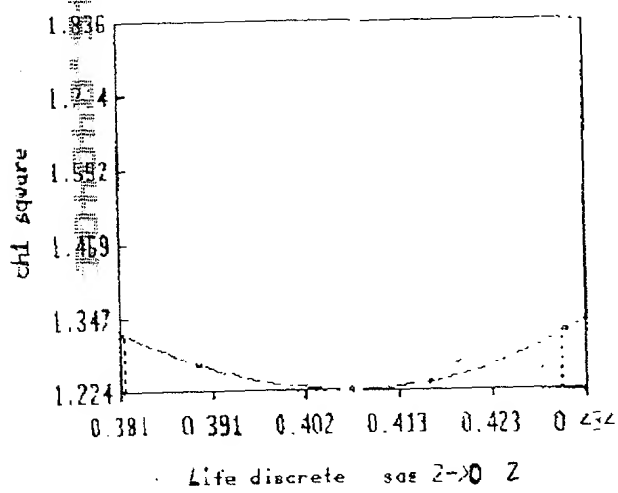


FIG. 37G

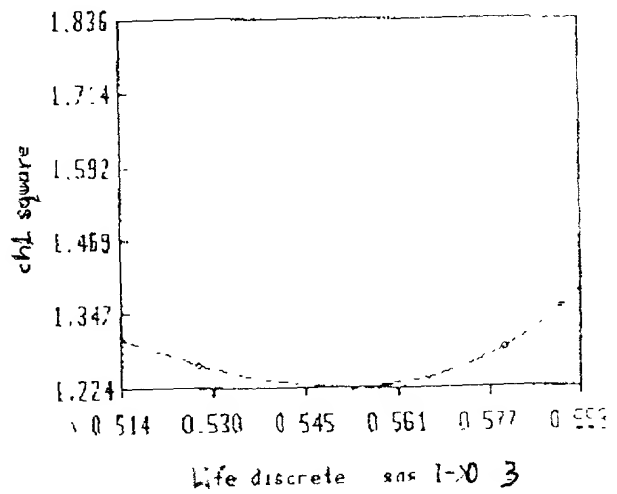


FIG. 37H

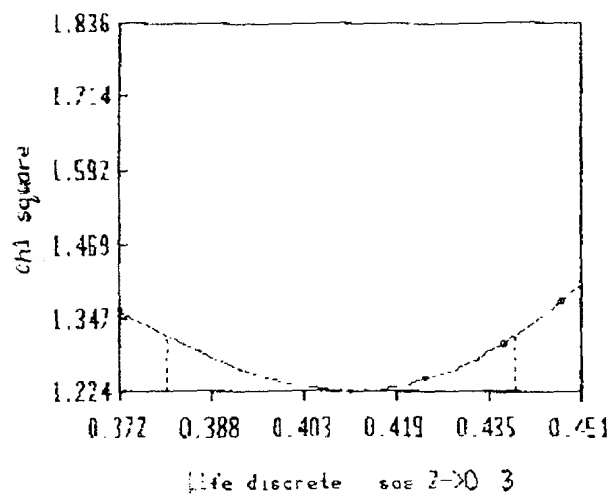


FIG. 37I

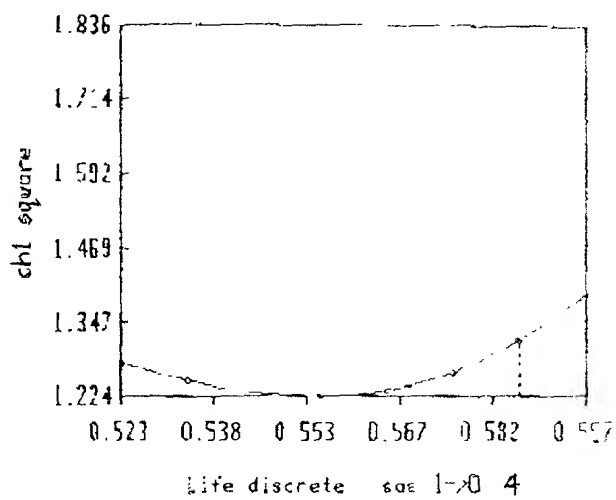


FIG. 37J

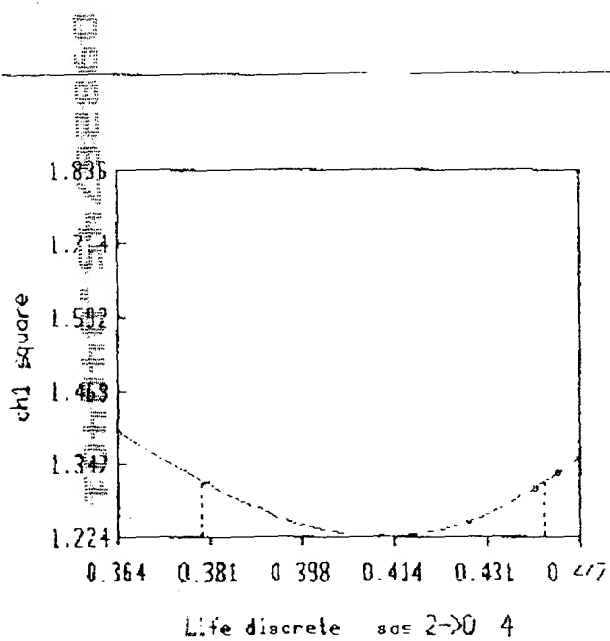


FIG. 37K

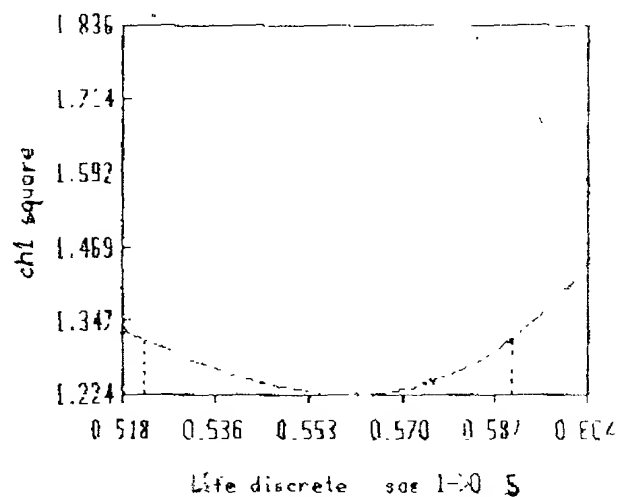


FIG. 37L

0925-54292560

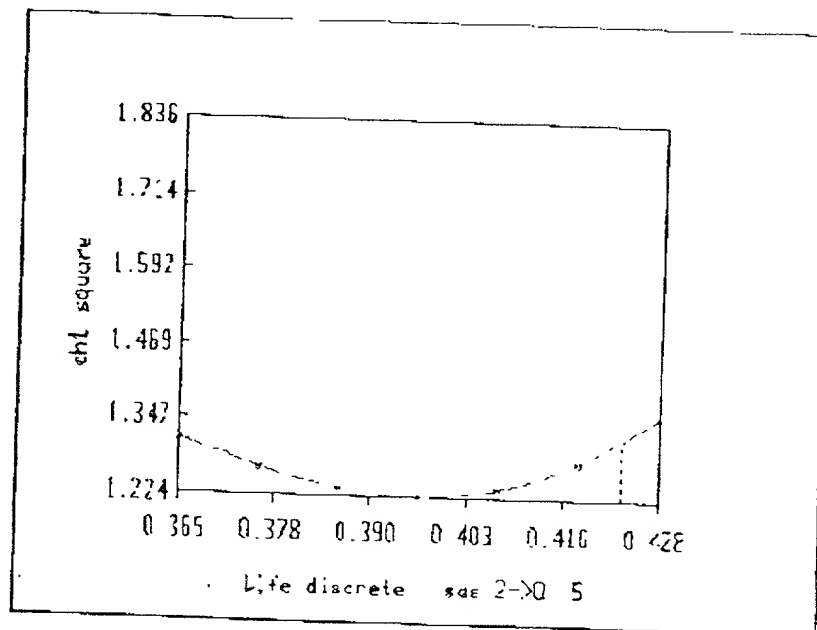


FIG. 37M

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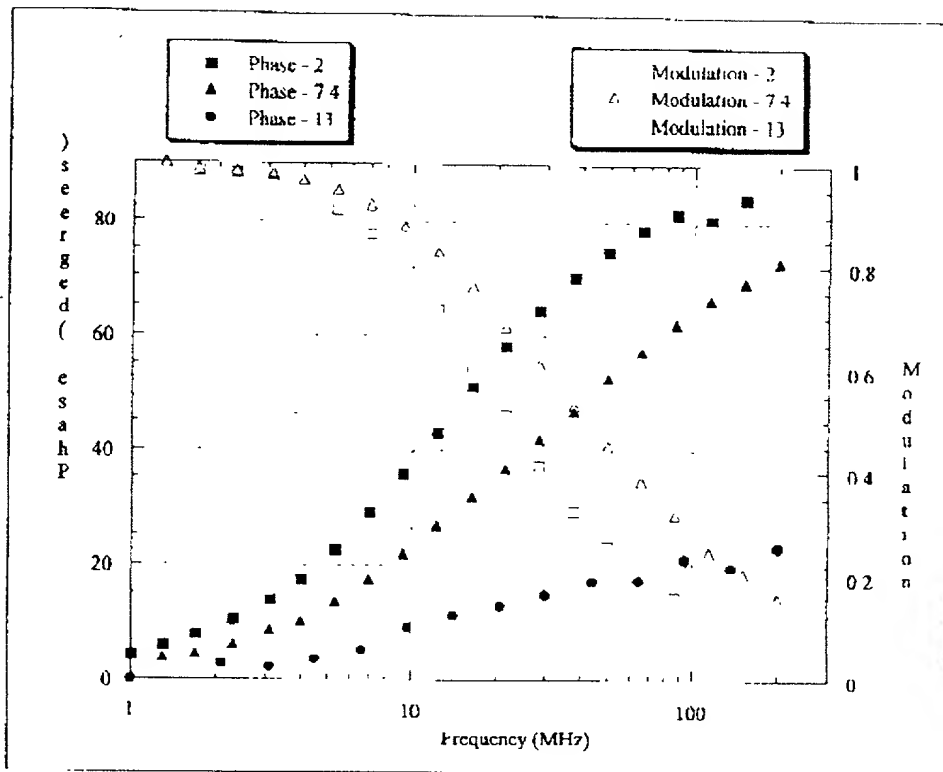


FIG. 38

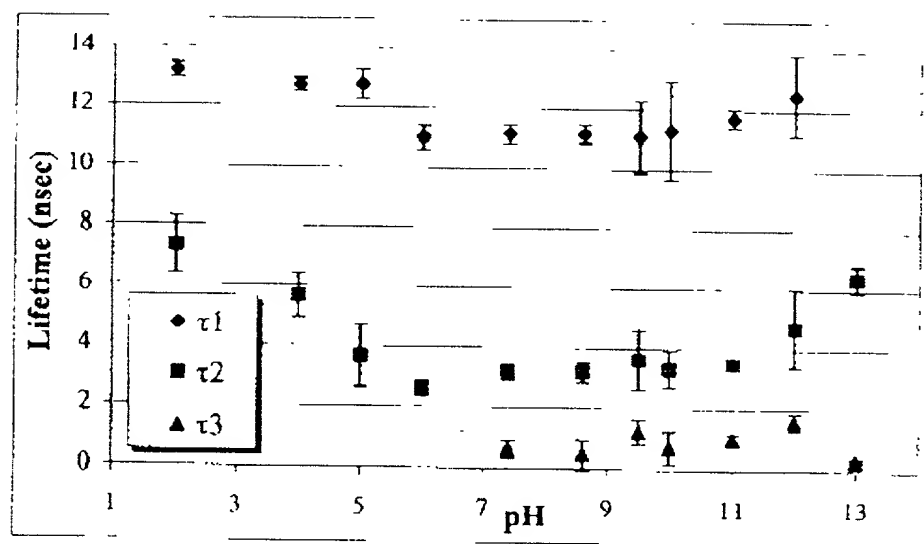


FIG. 39

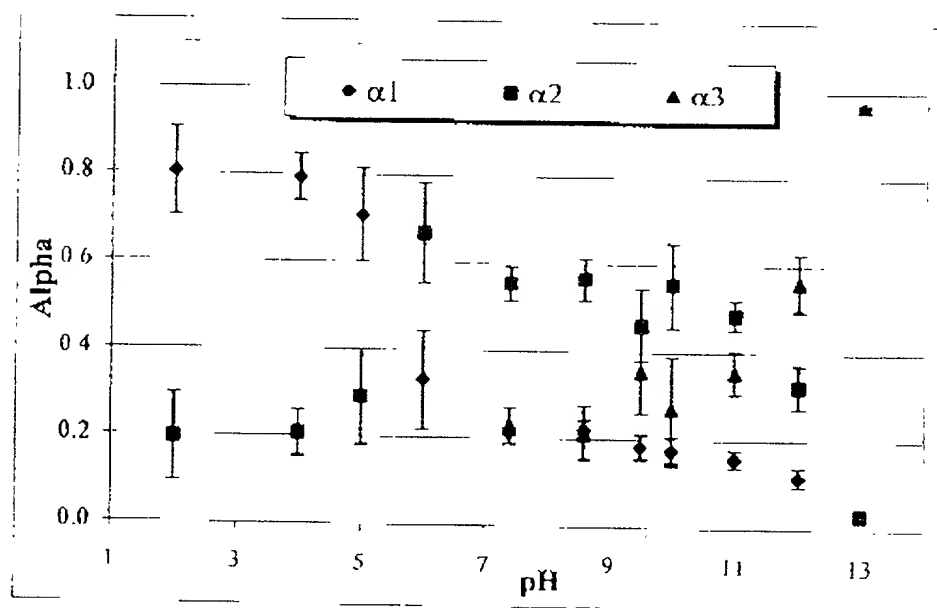


FIG. 40

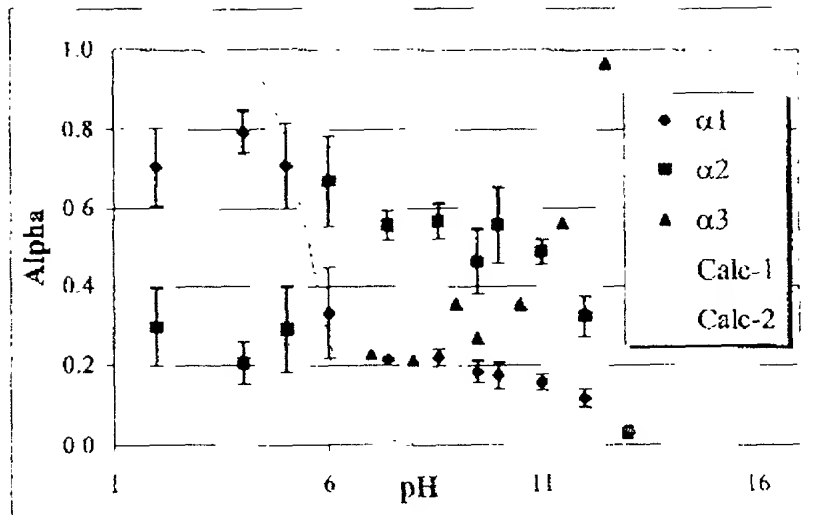


FIG. 41

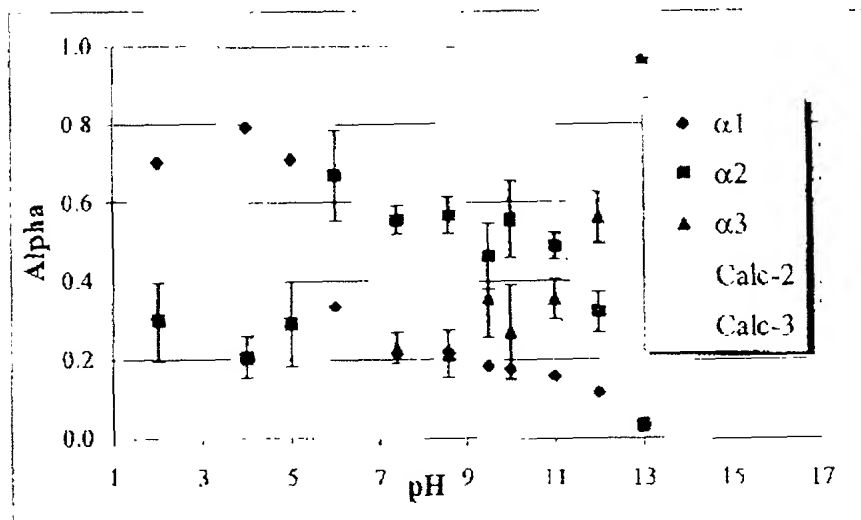


FIG. 42

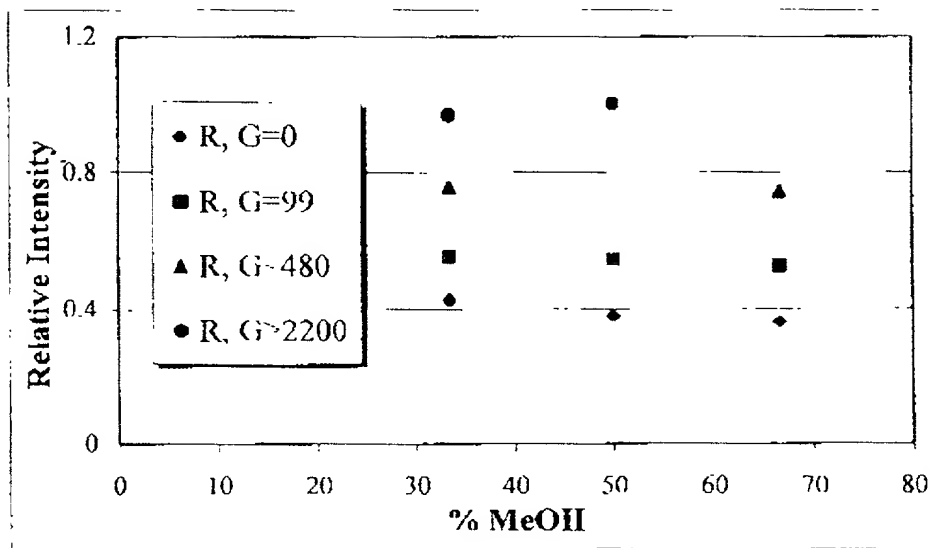


FIG. 43